

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Pedro R. Marques	Confirmation No.	4288
Serial No.:	10/782,291		
Filed:	February 19, 2004	Customer No.:	72689
Examiner:	Roberta A. Shand		
Group Art Unit:	2416		
Docket No.:	1014-078US01/JNP-0330		
Title:	DISTRIBUTION OF TRAFFIC FLOW CRITERIA		

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Commissioner for Patents
P.O. Box 1450
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Sir:

Applicant respectfully requests a Pre-Appeal Brief Review based upon the Examiner's failure to establish a prima facie case of obviousness of claims 1-91 under 35 U.S.C. § 103(a) in the Final Office Action mailed June 23, 2009. As outlined below, the applied references fail to disclose or suggest one or more elements recited in Applicant's independent claims 1, 16, 32, 39, 46, 55, and 63. For at least this reason, the rejections under 35 U.S.C. § 103(a) were improper.

For the sake of clarity, Applicant only presents arguments below with respect to claim 1. By setting forth the following clear grounds of error with respect to claim 1, Applicant does not assert that they are the only errors in the Office Action, nor does Applicant waive any additional arguments that may be asserted in an Appeal Brief, particularly with respect to the independent claims and any claims dependent thereon.

Independent claim 1

Claim 1 is directed towards a method for distributing traffic flow criteria between network devices. The method of claim 1 comprises defining a flow specification data type for a routing protocol, wherein the flow specification data type allows a variable number of packet flow attributes to be specified for a packet flow through a network, generating, with a first routing device, a message that encodes routing topology information, wherein the routing topology information defines at least one route between a first network device and a second network device, and traffic flow criteria specifying the packet flow in accordance with the flow specification data type, and communicating, with the first routing device, the message to a second routing device to direct the second routing device to control network traffic based on the traffic flow criteria, wherein the traffic flow criteria comprises source information that identifies a source network device of the packet flow.

In support of the rejection under 35 U.S.C. § 103(a) of independent claim 1 in the Final Office Action, the Examiner indicated that claim 1 was unpatentable over U.S. Patent Application Publication No. 2005/0175341 to Ovadia ("Ovadia") in view of U.S. Patent No. 6,775,280 to Ma ("Ma"). Applicant respectfully disagrees. Even if combined, the applied references fail to disclose or suggest all the features recited in Applicant's claim 1, and provide no apparent reason for modification to include such features.

Ovadia fails to disclose or suggest "defining a flow specification data type for a routing protocol, wherein the flow specification data type allows a variable number of packet flow attributes to be specified for a packet flow through a network," particularly in combination with the other elements recited in claim 1. In the Office Action,¹ the Examiner indicated that paragraph [0170] Ovadia discloses this element. Applicant respectfully disagrees. Paragraph [0170] of Ovadia recites the following:

¹ Office Action, dated June 23, 2009, page 2.

[0170] BGP is a path-vector protocol that works by sending route advertisements. Routing information is stored at each BGP router as a combination of destination and attributes of the path to that destination. A route advertisement indicates that reachability of a network (i.e., a network address and a netmask representing block of contiguous IP address. Besides the reachable network and the IP address of the router that is used to reach this network (known as the next hop), a route advertisement also contains the AS path attribute, which contains the list of all the transit AS's that may be used to reach the announced network. The length of the AS path may be considered as the route metric.

As seen above, there is no teaching or suggestion in paragraph [0170] of Ovadia to define a *flow specification data type* for a routing protocol, wherein the flow specification data type allows a variable number of packet flow attributes to be specified for a packet flow through a network, as required by claim 1. Rather, paragraph [0170] simply discloses standard Border Gateway Protocol (BGP). The Examiner has not introduced substantial evidence to establish that standard BGP includes a flow specification data type as claimed by the Applicant.

To be clear, Ovadia does disclose extending BGP² and, in particular, extending the BGP UPDATE message.³ For example, Ovadia discloses at paragraph [0171] that “the standard BGP needs to be extended to convey the necessary lightpath routing information to the BGP routers. The goal is to leverage the existing BGP properties, but extend them to meet the routing requirements of PBS networks.” As seen in FIG. 17b, the extended BGP UPDATE message includes fields such as an “available wavelength attribute” field and an “available fiber attribute” field. These fields, however, do not define a flow specification data type for a routing protocol, wherein the flow specification data type allows a variable number of packet flow attributes to be specified for a packet flow through a network, as required by claim 1. Rather, these attributes refer to the optical links 904 that connect various switching PBS switching modules,⁴ as seen in FIG. 9b of Ovadia.

Specific attributes of optical link 904 in FIG. 9 of Ovadia (i.e., the physical communication medium) such as a wavelength attribute and a fiber attribute do *not* define a flow specification data type for a routing protocol, wherein the flow specification data type allows a variable number of packet flow attributes to be specified for a packet flow through a network, as

² Ovadia, paragraph [0164].

³ *Id.* at paragraphs [0171], [0173] and FIG. 17b.

⁴ *Id.* at paragraph [0161].

in claim 1. To be sure, wavelength attributes and fiber attributes are not attributes of packet flows. As stated in Applicant's specification at paragraph [0045], packet flow criteria may include "source address, destination address, source port, destination port, protocol, quality of service (QoS) level, and/or other flow criteria." The wavelength attributes and a fiber attributes of Ovadia simply refer to the lightpath characteristics of the optical links 904 connecting neighboring Server Area Networks (SANs) and are unrelated to attributes of specific flows of packets or other data units flowing over the link. Lightpath characteristics of an optical are not packet flow attributes.

Also with respect to claim 1, the Office Action further asserted⁵ that Ovadia discloses communicating, with the first routing device, the message to a second routing device to direct the second routing device to control network traffic based on the traffic flow criteria, wherein the traffic flow criteria comprises source information that identifies a source network device of the packet flow, as required in claim 1, at paragraphs [0170]-[0171] and FIG. 11. Applicant respectfully disagrees. FIG. 11 of Ovadia is simply the format of a Fibre-Channel frame.⁶ As stated in Ovadia,⁷

The basic building blocks of an FC connection are the Frames. The Frames contain the information to be transmitted (i.e., payload), the address of the source and destination ports, and link control information. Frames are broadly categorized as Data frames and Link_control frames. Data frames may be used as Link_Data frames and Device_Data frames, link control frames are classified as Acknowledge (ACK) and Link_Response (Busy and Reject) frames. The primary function of the Fabric is to receive the Frames from the source port and route them to the destination port. It is the FC-2 layer's responsibility to break the data to be transmitted into Frame size, and reassemble the Frames.

The source and destination information described above in paragraph [0121] of Ovadia does not relate to a routing message at all but instead traffic carried by a link. That is, the source and destination information is *not* traffic flow criteria carried by a routing message and that comprises source information that identifies a source network device of a packet flow, as required by claim 1. Rather, the source and destination information described is merely standard

⁵ Office Action, dated June 23, 2009, page 2.

⁶ Ovadia, paragraph [0026].

⁷ *Id.* at paragraph [0121].

source and destination information of a frame necessary for that same frame to reach a destination address and convey the source address of the originating device. In claim 1, the traffic flow criteria specify the packet flow in accordance with the flow specification data type. In no manner does Ovadia disclose or suggest such traffic flow criteria or incorporation of the traffic flow criteria in a routing message.

Ma discloses techniques for routing data that “provide load-balancing while, at the same time, satisfying QoS requirements.”⁸ The addition of any alleged disclosure in Ma with respect to routing topology information that defines at least one route between a first network device and a second network device does nothing to remedy the deficiencies of Ovadia. As such, claim 1 is non-obvious over the applied references.

CONCLUSION

For at least the reasons stated above, the rejection of at least independent claim 1 was improper and must be reversed. Applicant requests a review and a panel decision that promptly resolves the issues in Applicant's favor and eliminates the need for an Appeal Brief. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Please charge any additional fees or credit any overpayment to deposit account number 50-1778.

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⁸ Ma, col. 2, lines 2-10.